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ABSTRACT

A study was conducted to discover the perceptions and attitudes of students and faculty regarding their experiences with two distance learning programs, an online computer program and a telecourse program. The online program is conducted at the University of Phoenix (Arizona) and delivers degree programs in various areas. The telecourse program is conducted at Coastline Community College (California) and offers 25 telecourses each semester. In all, 628 students and 64 faculty members responded to the survey questions. Online participants lived in 40 of the 50 states, while telecourse participants all lived in southern California. Overall results suggest that both faculty and students thought highly of both programs as academic products. Both were considered comparable to traditional academic programs. Students who did not miss face-to-face interaction gave the online program a significantly higher rating than those who missed the traditional interaction. Students viewed the online program more favorably than did faculty, and the reverse was true of the telecourse. Results also suggest that students and faculty consider distance education a viable alternative to meet the changing educational needs of our society. (Contains 8 references.) (CLD)

# *PERCEPTIONS AND ATTITUDES OF FACULTY AND STUDENTS IN TWO DISTANCE LEARNING MODES OF DELIVERY: ONLINE COMPUTER AND TELECOURSE*

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# PERCEPTIONS AND ATTITUDES OF FACULTY AND STUDENTS IN TWO DISTANCE LEARNING MODES OF DELIVERY: ONLINE COMPUTER AND TELECOURSE

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## ABSTRACT

This study was conducted to discover the perceptions and attitudes of students and faculty regarding their experiences with two distance learning programs, an on-line computer program and a telecourse program. From surveys of faculty and students, the authors observed similarities and differences between responses to these two distance learning methods.

## INTRODUCTION

There is a well-established need for educational programs to be delivered to adult students independent of time and place limitations. Learners increasingly need to be able to access educational opportunities through a variety of delivery systems not specifically tied to the traditional classroom location (Harris 1987). These needs, as well as financial considerations, are driving an increasing interest in distance learning among faculty, students, and administrators in higher education.

In an effort to educate students, clients, and employees, universities, private trainers, and large corporations are implementing interactive classrooms, classrooms and students connected by electronic means so that students can attend classes at remote sites. Particularly useful in situations where large distances separate the involved parties, interactive classrooms are also finding their way into urban universities where parking and other constraints may be barriers to attendance.

Distance learning applications have been emerging across the United States for years as telecommunications technology provides broader learning opportunities. The telecommunications technologies from which distance learning emanate include the transmission of audio signals in the form of voice or music, in combination with a video

signal, or in a silent, high speed invisible stream of data to a computer. The signals are broadcast (or microwaved) as radio or television or are transmitted via satellite to land-based stations (up-link, down-link). These technologies allow for the formation of communication networks among groups with common or specialized interests.

One of the advantages of distance education is that more students can be educated for a given level of investment than may be the case in traditional systems. Another significant advantage of distance education is the ability to reach large numbers of individuals who would not be able to attend classroom activities.

In the academic community, there has been some concern in distance learning regarding the equivalency of traditional delivery modes versus a distance education mode, specifically with programs involving television and computers, two technologies relatively new to most faculty. Rumble (1986) writes that the academic standards can vary enormously, not just between traditional and distance learning systems, but also between institutions of a similar type. None the less, educators and educational marketers are willing to experiment with these new delivery modes.

## PURPOSE OF THIS STUDY

The purpose of this study was to conduct exploratory research, to discover the perceptions and attitudes of students and faculty regarding their experiences with two distance-learning programs:
1) the ONLINE program at the University of Phoenix and
2) the Telecourse program at Coastline Community College.
By collecting data about each of the programs, an evaluation can be made of each program's effectiveness as perceived by the faculty and students. Some comparisons can be made of the two programs. From this analysis, the authors would hope that educational marketers would gain greater understanding of these two delivery systems and their impact or usefulness for future development.

## LITERATURE ON DISTANCE LEARNING

There are already a number of distance teaching and learning systems at work in a variety of different countries that can provide experience and information about distance learning programs (Harris 1987). Feasley (1983) states that distance education courses are offered by institutions that were established to provide only that type of instruction or as an adjunct of an existing campus-based college or university. Within existing institutions, distance learning courses may be offered through continuing education or special organizational units.

Three methods of organizing a distance education unit are possible and must be considered equally by the institutional manager. The

first is the network approach, in which a fairly small institution coordinates and uses the resources of a number of other frequently diverse institutions. A second approach uses many community centers in conjunction with multimedia components within courses. The third approach permits considerable flexibility in the timing, location, and frequency of meetings with faculty to chart and complete learning contracts.

According to Feasley (1983), requirements for the management of distance learning are very different from traditional ones. At distance teaching institutions, course design, production, distribution, and delivery are handled by the integration of many academic and non-academic specialists working in academic course teams or project groups.

## Financial Implications

One of the attractions of distance education is that the unit costs of teaching may be lower than those in traditional class-based education. In distance education, significant costs can be easily underestimated and incurred in the preparation of teaching materials (e.g., printed texts, television and radio broadcasts, video and audio materials, and computer-based instructional programs) before students enter the system and irrespective of the number likely to be enrolled. It can be difficult for educators to justify the level of funding required to set up a project. If the program is funded by the same mechanism as a traditional program, there is inevitable pressure to mold the program to fit these traditional funding requirements.

Comparisons of the average cost per student and per graduate in distance learning and teaching systems usually make the assumption that the quality of the teaching and of the graduates is the same. However, academic standards can vary greatly. Several studies conducted in the United Kingdom reflect that distance teaching can be more cost efficient than conventional education, and that the final academic outcome of a distance program is no different than that of a traditional one.

The success of distance education depends on the size of the market and the possibility of bringing the unit cost per student course down to a point which matches the ability and willingness of sufficient potential customers to pay for the educational services. The most significant advantages of distance education remains its ability to reach large numbers of individuals who would not be able to attend classroom-based activities, to provide flexible learning materials which students find easy to use, and to do so relatively cheaply given sufficient students in the system to experience economies of scale (Bowen 1980).

## Curriculum Issues

During the 1960's, video courses were often poorly produced and offered at odd, frequently early times of the day. The arrival of the personal computer, the satellite dish, and the video cassette recorder changed all that. Adult students, who account for 42% of those who take courses electronically, can log onto personal computers whenever they have the time. Sophisticated software presents lessons with advanced graphics and puts huge amounts of data at the student's fingertips. Students taking television courses can capture their lessons on their video cassette recorders, and study at their leisure. High quality production adds a dimension that is unmatched in the classroom.

Students who study electronically won't be receiving an inferior education. Benson states that in a 1985 study, faculty reported that their video students performed as well as or better than their classroom peers. Some faculty who work with distance learners feel that the lack of a classroom is very positive for some shy students who often become more assertive (Benson 1987).

A distance education curriculum must be tailored to the technology available and fit the standards of the given state or institution were it is developed and delivered. There is also a greater need for cooperatively developing materials in most modes.

## Faculty Role

Distance education faculty members are sometimes called mentors or tutors, because they direct students to learning materials, provide emotional support, and evaluate students' progress. The approval and continued credibility of distance education stems from the participation of regular faculty.

Faculty are motivated to participate in distance education by several factors: (1) the ability to reach new populations of learners, (2) the opportunity to work with better prepared and more motivated learners, (3) the flexibility in their work schedule and advantages such as the necessity for more efficient organization and the ability to use a broader range of media-based resources. (Taylor and White 1991).

The role of faculty varies greatly among institutions (Feasley 1983). It depends on the extent to which existing materials can be used, the involvement of others in the same discipline, the media that are used, and the skills the faculty member brings to the process. Faculty involvement is encouraged because it develops a more enthusiastic attitude toward the project.

Because distance learning courses are designed with few class meetings, the materials packets are more important and should include information on: (1) the books to buy and where to buy them, (2) the course assignments and timeline, (3) examination

instructions, (4) instructions for contacting the instructor to ask questions, (5) the grading criteria, and so on. Materials should compel the student to respond actively and the writer must anticipate commonly asked questions.

## The Distance Learner

The distance learner is most often found in higher education where a more flexible atmosphere lends itself to various applications. Distance learners usually exhibit one or more of the following characteristics. They are: (1) geographically disadvantaged, (2) physically disabled, (3) financially disadvantaged, (4) interested in access to electronic media opportunities, (5) remedial students with high levels of motivation (6) trying to avoid particular learning dynamics, (7) previous lack of success with traditional programs, (8) 35 years of age, on the average, and (9) life-long learners on a part-time basis.

Problems experienced by distance learners include: (1) lack of time to study, (2) difficulties in concentration, (3) conflict with family commitments, (4) low levels of motivation, (5) lack of study skills, (6) lack of resources, (7) anxiety about the course, and (8) feelings of isolation.

In the face of these common problems, many students do succeed in distance learning programs. If students drop out, it may be because of the overwhelming nature of the course material, the frustrations of trying to interact with the institution, or because they are not involved with activities or people who can help sustain their motivation. Technology can be perceived as very cold and non-caring and needs to be balanced with the human factor.

Loneliness is a common factor among all distance learners (Thiagarajan 1978). They seem to miss the reinforcement from faculty and the sharing and mutual learning with peers. The distance learning student is more likely to experience isolation, even alienation, from the institution. They may be geographically remote from the institution or fellow students. The students may be uncertain of how the system in which they have enrolled in functions (especially if little material or contact has been provided). On the other hand the system may appear to be too complex and remote to allow easy access.

## ONLINE EDUCATION

The ONLINE program of the University of Phoenix uses computer conferencing to deliver degree programs to students from around the world. The key attributes of this program are that it is an asynchronous (time independent), place independent, many-to-many interactive communication medium. This combination of features makes ONLINE education a new and unique domain even as the content of each ONLINE course is the same as other University courses.

ONLINE is particularly appropriate for collaborative learning approaches which emphasize group interaction in student groups of 12-15 working adults. Computer conferencing facilitates the sharing of knowledge and understanding among members of a group. Students are required to be on-line weekly five out of seven days. The computer maintains an on-going common transcript of the interactions among the many people discussing a topic. Each conference is a file that is built and shared by the members of that conference. The system automatically files notes into topical discussions and updates members on new comments in a topic. Access can be configured to reflect the way in which the conference participants need to communicate: users can meet, break into small groups, complete assigned tasks, and discuss issues or readings--all through the computer.

The University based its ONLINE educational delivery system on a computer conferencing software package produced by Dynamic Microprocessors Associates of New York. The University extensively modified this software package for use in its ONLINE program. The system features multi-line conferencing and runs on a single 386-based IBM compatible personal computer that allows up to six users to dial in simultaneously via their own computer and modem at 300-2400 bits per second.

Each student is provided with a private electronic mail box as well as access to his or her study group that is shared with study group members only. All students in the class share access, along with the instructor, to a learning group mailbox. This class mailbox is a focal point for instructor communication to the class as well as the vehicle for class discussion. Students transmit completed assignments electronically.

The asynchronous, text-based nature of the medium allows user control over the time, place, pace and nature of the interaction. Since the classroom is open '24 hours per day' users can choose their best readiness time for engaging in the learning activity; they can also spend as long and return as often as they wish.

## TELECOURSES

Coastline Community College in Fountain Valley, California has long been recognized as a leader in distance learning and has been producing and delivering telecourses since the college opened in 1976. It is a public, accredited, and non-profit producer of instructional media which it markets and distributes throughout the United States and internationally.

The college also offers telecourses locally for college credit. The telecourses are broadcast by KOCE-TV, Channel 50, the Coast District PBS television station and cablecast through Coastline's Television/Telemedia Center. In its local area Coastline has enrolled more than 110,000 television students as of 1991. The college offers some 25 telecourses each semester, about half of

which have been produced or co-produced by Coastline. College credit telecourses are aired approximately 80 hours each week to provide the widest possible availability and convenience. Videocassettes of television programs are placed in several libraries and viewing centers and are available for rental through the college bookstore.

Telecourses are complete learning systems that combine video and print components to be used under an instructor's direction, but without classroom instruction. Professionally produced video series--usually comprising 26 half-hour programs, course textbooks and study guides, and a full complement of quizzes, study activities, and examinations--enable students to attain the telecourse goals and learning objectives.

Because development of state-of-the-art, broadcast-quality telecourses can be expensive (with budgets of $1 million or more not uncommon) they must be funded, for the most part, from resources outside the college. Coastline enlists the support and involvement of public and private foundations, educational institutions, consortia, publishing firms, and other interested organizations that may use the courses.

Coastline provides the expert instructional design that ensures the new course will be academically sound and instructionally effective. Every telecourse produced by Coastline must be approved for transfer credit to the California State University system and/or the University of California. Instructional designers work with instructors, academic authors, consultants, and video producers to create informative and interesting video programs and print materials for each telecourse. Video programs are edited or replaced as necessary to maintain accuracy and timeliness. When a new edition of a course textbook is published, the corresponding telecourse study guide and related print materials are thoroughly updated. Portions of many courses are shot on location to achieve the authenticity evoked by depicting people and subject matter in true-to-life settings. Several of Coastline's telecourses have won Emmy Awards.

Students can contact their faculty during their regularly scheduled office hours with questions. Take-home quizzes are sent and returned corrected through the mail. Students can attend from one to three review sessions in person with their faculty member if they wish. The course grade is determined by the quizzes, a mid-term and a final examination taken in person at a school site.

## RESEARCH METHODS AND QUESTIONS

In conducting this research, two surveys of the ONLINE program were administered and comparison data was collected from Coastline's Telecourse program. In addition, research was collected on distance learning from the literature.

With the instructional delivery system originating at a distant location from the student's actual learning environment, several issues were of interest to the researchers:

1. What is the perception of students and faculty with regard to the academic product of these programs?
2. Do the students and faculty feel that the education received is comparable to a traditional program?
3. Do students and faculty view these two programs as valid delivery modes for higher education?
4. Do students and faculty have any specific concerns or issues with either program that will be of interest to educators?

In addition to these questions, this study also examined the special problems and challenges that distance education students and faculty experience during their coursework or degree programs. Marketing managers will be interested in this data to provide information for future development of distance learning systems.

The two programs selected for study were: the ONLINE program from the University of Phoenix, Phoenix, Arizona and the Telecourse program from Coastline Community College, Fountain Valley California. 628 students and 64 faculty responded to written surveys for their respective groups. Students and faculty who responded to the ONLINE surveys live in forty of the fifty States, primarily California and Arizona. The Telecourse students and faculty live in Southern California. Faculty respondents to the ONLINE surveys had an average teaching career in campus programs of 5.5 years; Telecourse faculty averaged 6 years. Very few of the faculty had experience with other distance learning programs. The majority of the faculty from both programs had taught in a traditional classroom prior to becoming involved in distance learning.

ONLINE and Telecourse program students were older than the average age of 35 reported by Burleton (1985) for most distance learners. In the ONLINE program about 75% of the respondents were male; in the Telecourse program about 46% of the respondents were male. About half of the students have attended 3 or more colleges.

## FINDINGS

When faculty were asked about why they chose to participate in the ONLINE program, the two most commonly named reasons were convenience (named by 57%) and the instructional method (named by 46%). Several faculty expressed interest in ONLINE as an opportunity to try a new experience. Many commented on the enjoyment of the learning experience for both faculty and students. Two faculty members had relocated out of the UOP's campus areas and wanted to stay involved in teaching and ONLINE gave them this opportunity.

Coastline faculty chose to teach Telecourses for similar reasons. They liked the flexibility of the instructional method and the "enriched" students they are able to serve in this program.

When ONLINE faculty were asked what they liked least about the program, faculty named curriculum, time, and support services most frequently. Faculty (43%) did not like the lack of control in curriculum development in the ONLINE program, and felt that some modules were inflexible, out-of-date, or not appropriate. Several faculty commented that ONLINE takes more of their time than a traditional classroom and that they are not compensated accordingly. Other concerns were a lack of immediate feedback and classes that are too large to be manageable (also mentioned by Coastline faculty).

Coastline faculty responded in a similar manner with concerns about curriculum, time, and support services named as the least enjoyable features of the Telecourse program. The Coastline faculty also mentioned the "lack of respect and understanding from the Coast District about Telecourses".

Faculty were asked to identify the ways in which ONLINE students were different. Eighty-four percent reported that they had observed that the ONLINE students are more serious, accomplished, and articulate. Faculty also commented on the stronger analytical and written communication skills of the ONLINE students. Students were more self-directed and took more risks. Student enthusiasm was reported as "generally high". Faculty felt that the caliber of the student in the ONLINE program was higher (than that of the traditional student) and that everyone participated, "unlike the classroom where some dominate and others 'slide'". Coastline faculty comments regarding their Telecourse students echo the preceding statements. They felt that the telecourse program required more discipline and independence of its older students and that telecourse students were better prepared and were self-starters.

Eighty percent of the ONLINE faculty reported that support services were adequate. Generally, faculty were pleased with the support services, particularly with the Systems Operator, who is a key component to the ONLINE program.

When students were asked why they chose distance education, most (83%) reported that the schedule was important. Nearly half (47%) reported that the instructional method also influenced their decision. Twenty-nine percent reported other reasons for choosing distance education, with the largest number of responses speaking to convenience of schedule, time, and flexibility. Students had a strong preference for not commuting and liked the luxury of not having to commit to a specific class meeting time. Students liked "setting your own pace" and the "opportunity to watch the program several times to completely absorb the material"(Telecourse). One student responded "I am surprised how similar Telecourses are to the actual classroom content."

Students reported missing both the face-to-face interactions (39%), and group dynamics (27%); and 74% responded that they experienced different feelings as a distance education student.

Some students "don't miss the group dynamics of the classroom... Discussion in the classroom leads to irrelevant topics."

An interesting finding was that those students who did not miss face-to-face interaction, gave the program significantly higher rating than those who did.

Only half the faculty responding believed that teaching ONLINE affects their teaching style. Coastline faculty responded that "teaching a telecourse makes me more sensitive to student needs, and better organized for all classroom areas."

Eighty-five percent of faculty reported that there were characteristics about teaching that were unique to the ONLINE system. Faculty spoke about the quality of the student discussion and the diversity of the class. They felt that much more time, per student, is devoted to assignment completion. Faculty observed that ONLINE requires more succinct communication. ONLINE students come across as cheerful or pleasant; you don't see their tired faces. Faculty report that teaching is different, not knowing what the student looks like or sounds like. Evaluation is based on written work solely.

Students commented on the uniqueness of the ONLINE program, especially the closeness of relationships with classmates. They felt that the quality of dialogue between students was exceptionally high.

An overwhelming majority (97%) of the ONLINE faculty reported that they would recommend the program to others. Ninety-nine percent of Coastline faculty stated that they would recommend the Telecourse program to others. The only negative response was from a faculty member who felt that the subject matter (an art class) was not appropriate for a telecourse modality.

Students perceptions of the ONLINE program as an academic product were also positive. Student expectations for the program were substantially met. Understandably, the area of "group discussion" received the lowest ratings. ONLINE students were very satisfied with the level of support services.

Coastline students were asked if they felt that they were receiving the same degree of content in the telecourse as students in the Coastline classroom. All of the students responded that they felt that the content was the same. Some students felt that the telecourses provided more information than the classroom mode.

The University determines the ONLINE retention rate by measuring ending enrollment numbers and new enrollments. The program is designed for stop-out activity. However, it appears that about 40% of the students who start the program complete it. For Telecourses, the average completion rate is about 50%.

Eighty-five percent of the faculty and 97% of the students reported they believed the ONLINE program to be effective. Students appear to have more positive feelings about the program than faculty do. All Coastline faculty rated the Telecourse program as excellent while students rated the program as 85% excellent and 15% good.

## CONCLUSIONS

Overall results suggest that both students and faculty think highly of the ONLINE program and the Telecourse program as academic products. Both students and faculty feel that the programs are comparable to a traditional program.

Students who did not miss the face-to-face interaction of the traditional classroom gave the ONLINE program a significantly higher rating than those who did miss the face-to-face interaction. Students appear to view the effectiveness of the ONLINE program more favorably than faculty, while faculty involved with the Telecourse program appear to rate it more favorably than students. This factor may be related to faculty time and compensation.

Overall, the majority of students and faculty surveyed are pleased with the quality of education received through both of these distance learning systems. The programs are perceived as being successful but not necessarily meant for everyone. The examples cited in this study indicate that educators and students seriously consider distance education as a viable alternative to the changing educational needs of our society. These indications include an increase in the number and variety of distance education options available.

## RECOMMENDATIONS

For those institutions considering the offering of degree programs either by computer conferencing or television, it would appear that either modality can be effective with students. Faculty salary is an issue that needs careful study as compensation for unique delivery systems is designed.

Distance learning educators need to continually explore alternative ways to meet students' interaction needs. Students have a high desire to "see" their electronic classmates once they begin to interact with them.

The importance of group interaction to the student may be considered when designing the admission screening process. Some students are not good prospects for distance learning.

Involve faculty as much as possible in the curriculum development process. Faculty in both systems felt some lack of control over the curriculum and thus where less enthusiastic.

Educational institutions should consider distance education as a viable alternative to meet the changing needs of our society. Colleges and Universities can attract an increasing number of new students using a distance modality--students who otherwise might not have access to higher education. Distance learning is seen by both faculty and students alike as the trend of the future. It is a proven way to bring higher education to a population that may not be able, or choose not, to obtain education in the traditional manner.

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